ST-230B 230W BEAM LIGHT MANUAL

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CAUTION!

Keep this device away from rain and moistener! Unplug mains lead before opening the housing! For your own safety, please read this user manage carefully before you initial start-up!

Introduction

Thank you for choosing our moving head light. You acquired a versatile, powerful and intelligent lighting-effect. Please unpack your casing and make sure that there are no damages caused by transportation. Should there be any, please refer to your local dealer or our factory and do not take the device into operation.

Multifid-function moving head light trait:

●Color system: One color wheel with seven kinds of different color diachronic filters plus white
●One gobo wheel with six rotating metal gobos and one glass gobo, rotating gobo can rotate to 360^0
●High speed rotating 8-facet prism
●Combined shutter/dimmer unit allowing very smooth dimming and strobe effect 1-10 flash/second
●The lighting of the stock size
●Addressing, special functions setting, effects calibration via control panel with LCD TOUCH SCREEN.
●Readout fixture and lamp usage, receiving DMX values, temperature, etc
●Macro-function for rotating gobo/rotating prism combinations
●Black out while the light head moving or gobo color changing
●Remote reset function
●Intelligent control panel with LCD TOUCH SCREEN.
●Silent fans cooling
●20 DMX channels
●Pan movement rang 530°, Tilt movement rang 280°
●High luminous-efficiency parabolic mirror and double condenser system
●Mechanical multi-step focus
●Focus is controllable through the mechanization of DMX
●Preprogrammed changeable or stochastic grating pulse effect
●All lenses are anti-reflection coated
●9 high quality stepper-motors for smooth movement
●Self-resettable therme-fuse
●For YODN MSD 7R 230W lamp

Safety Instructions

CAUTION ! Be careful with your operations. With a dangerous voltage you can suffer a dangerous electric shock when touching the wire!

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

Important statement：

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

●If the device has been exposed to drastic temperature fluctuation, (e.g. after transportation), do not open the light at once. The agglomeration of vapor is likely destroying your product. Do not open the product until it reach normal temperature.

●This device falls under protection class 1.The power plug must only be plugged into a protection class 1 outlet. Never let the power cord come into contact with other cables! Handle the power cord all connections with the mains with particular caution!

●Make sure that the available voltage is not higher than stated on the rear panel

●Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power cord by the plug. Never pull out the plug by tugging the power-cord.

●Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power cord by the plug. Never pull out the plug by tugging the power-cord.

●During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

●CAUTION: During the operation, the housing becomes very hot.

●Never frequently open/close the lighting for reducing the life of the lamp

●Never look directly into the light source, as sensitive persons may suffer an epileptic shock (especially meat for epileptics)!

●Damages caused by non-observance are not subject to warranty.

●Keep away children and amateurs!

Operating Determinations:

●This device is a moving-head spot for creating decorative effects. And was designed for indoor use only.

●This device is designed for professional use, for example, on stages, in discotheques, and theaters, etc.

●Lighting effects are not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

●Do not shake the device. Avoid brute force when installing or operating the device.

●Never lift the fixture by holding it at the projector head, as the mechanic may be damaged. Always hold the fixture at the transport handles.

●When choosing the installation spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be cables lying around. Make sure the safety of others and yours.

●Always fix the fixture with an appropriate safety-rope. Fix the safety rope at the correct holes only.

●Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

●The lamp must never be ignited if the objective lens or any housing cover is open, as discharge lamps may expose and emit a high ultraviolet, which may cause burn.

●The maximum ambient temperature must never be exceeded.
CAUTION: The lens has to be replaced when it is obviously damaged, so that its function is impaired, e.g. dug to cracks or deep scratches.
●Operate the device only after you have familiarized with its functions. Persons not qualified are not allowed to operate the device. Most damages are the result of unprofessional operation.
CAUTION: The lamp has to be replaced when it is damaged or deformed due to the heat!
●Please use the original packing if the device is to be transported.
●Please consider that unauthorized modifications on the device are forbidden due to safety reasons.
●Never remove the serial barbal bar code from the device as this would make the guarantee void.
●If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, lamp explosion, crash.

Installation

DANGER: Install the lamp with the device switched off or unplug from mains!
Fitting/Exchanging the Lamp:
Open the small lamp cover by loosening 3 screws, open the small back cover at the back panel from the lighting, and gently pull the lamp out. If you want to change the lamp, remove the old lamp from the socket.
Do not install the lamp with a higher wattage! If so, the lamp will generate high temperatures, and the device is not designed for that case.
Damages caused by non-observance are not subject to warranty. Please follow the lamp manufacturer's announcement! Do not touch the glass bald bare handed during the installation. Make sure that the lamp is installed tightly into the lampholder.
Reinstall the top cover of the head and tighten those 4 screws.

Do not operate the fixture with operate housing-cover!

The brightness of the lighting has been aligned at the factory. Due to the difference between lamps, fine adjusted may improve light performance. Strike the lighting, open the grating and the diaphragm, adjust the brightness to 100%, then focus the light on a flat surface (e.g. wall). Through using three “A/B/C” adjusting screws, you can make the light focus on the hot spot (the brightest of the light line), Rotate one screw once to drag the hot spot through projectile shadow in the direction of diagonal. If you cannot find the hot spot, adjust the lamp until the light line is even. Through adjusting three “A/B/C” screws at the same time and deasil 1/4 rotate until the light line distribute equably then pull the lamp into, doing so can reduce hot spot.

If the light in the edge is brighter than in the center, or the light output is very low, it means the lamp is too back at the reflecting shelf. Through adjusting three "A/B/C" screws at the same time and deasil 1/4 rotate to push out the lamp until the light is bright and distribute equably.

Rigging and Hook:

●Pay attention to the safety!

●Please respectively consider the EN 60598-2-17 and the national standard during the installation！ The authorized dealer must only carry out the installation.

●The installation of the projectile shelf has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming demolishment.

●The installation must always be secured with a secondary safety attachment, e.g.an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

●When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

●The operator has to make sure that the safety measure and the machine's technical installation is approved by an expert before taking into operator for the first time and after changes before taking into operation anther time.

●The operator has to make sure that an expert approves safety measure and the machine's technical installation after every four years in the course of an acceptance test.

●The operator has to make sure that a technician approves the relative safety measure and the machine's technical installation once a year.

●Procedure: The projectile shelf should be installed outside areas where persons may walk by or be seated.

IMPORTANT MATTER! Overhead rigging requires extensive experience, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury or property loss.

●The projectile shelf has to be installed out of the reach of people.

●If the projectile shelf shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The projectile shelf must never be fixed swinging freely in the room.

CAUTION**:** Projectile shelf may cause severe injurers when crashing down！ If you have doubted concerning the safety of a possible installation, do not install the projectile shelf!

●Before rigging make sure that the installation area can hold a minimum point load of 10 times the projector's weight.

●DANGER OF FIRE! When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) within a distance of mini mun 0.5 meter.

CAUTION！ Use two appropriate clamps to rig the fixture on the truss. Follow the instructions mentioned at the bottom of the base. Make sure that the device is fixed properly! Ensure that the structure (truss) to which you are attaching the fixtures is secure.

- The moving head light can be placed directly on the floor or rigged in any orientation on a truss without altering its operation character rustics. There are two possibilities to fix the base of the lighting, Use the rigging clamp to merge M10 or M12 screw—please check the base. For overhead use, always install a safety rope that can hold at least 10 times the weight of the fixture. You must only use safety rope with screw on carabines.

Connection with the Mains:

Connect the device to the mains with the power-plug.

The occupation of the connection-cables is as follow：

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/green	Earth	

The earth has to be connected！

Pay attention to the safety！

Before taking into operation for the first time, the installation has to be approved by an expert！

DMX-512 Connection/Connection between Fixtures

The wires must not come into contact with each other; otherwise the fixtures will not work at all, or will not work properly.

0nly use a stereo-shielded cable and 3-pin XLR-plugs/5-pin XLR-plugs and connectors in order to controller with the fixture or one fixture with anther.

Occupation of the XLR Connection

DMX-output DMX-input

XLR mounting-socket XLR mounting-plug:

1-Ground

2-Signal (-)

3-Signal (+)

If you are using the recommended controllers, you can connect the DMX-output of the controller directly with the DMX-input of the first fixture in the DMX-chain. If you wish to connect DMX-controllers with other XLR-output, you need to use adapter-cables.

Building a Serial DMX Chain

Connect the DMX-output of the first fixture in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected.

CAUTION: At the last fixture, the DMX cable has to be terminated with a terminator. Solder a 120-ohm resistor between Signal (-) and (+) into a 3-pin XLR-plug it in the DMX-output of the last fixture.

DMX Channels

DMX Channel Description:

DMX Channel	Function	Data	Function Description
CH1	Color Wheel	0-255	Seven colors plus white
CH2	Stop / Strobe	0-255	Stop / Strobe
CH3	Dimmer	0-255	Dimmer from dark to bright
CH4	Static Gobos Changing	0-255	Static gobos changing
CH5	Prism Insertion	0-255	Prism Insertion
CH6	Prism Rotation	0-255	Prism Rotation
CH7	Effect Movement	0-255	Effect Movement
CH8	Frost	0-255	Frost
CH9	Focus	0-255	Focus
CH10	Pan	0-255	Rotate 540 degree
CH11	Pan Fine	0-255	Pan Fine
CH12	Tilt	0-255	Rotate 270 degree
CH13	Tilt Fine	0-255	Tilt Fine
CH14	Function	0-255	Function
CH15	Reset	0-255	Reset
CH16	Lamp Control (With Option “Lamp DMX” On	0-255	Lamp Control (With Option “Lamp DMX” On
CH17	Pan/Tilt Time	0-255	Pan/Tilt Time
CH18	Color Time	0-255	Color Time
CH19	Beam Time	0-255	Beam Time
CH20	Gobo Time	0-255	Gobo Time

Addressing

The control board on the front side of the base allows you to assing the DMX fixture the address, which is defined as the first channel. For example, if you set the address to channel 5, this lighting will use the channel 5 to 16 for control

Please be sure that you do not have any overlapping channels in order to control each lighting correctly and independently from any other fixture on the DMX data link.

Addressing setting:

1.Turn on the moving head, wait till finishing the reset (RST flashes on the display).
2.The main menu is accessed by pressing the [MODE] key –press this one until the display shows message“R001”. Press [ENTER] to confirm.
3.Use the [UP] and [DOWN] keys to select the required address.
4.Press [ENTER] to confirm or press [MODE] to cancel.

Controlling:

After having addressed the lighting, you may now start operating these via your lighting controller.

Note: After switching on, the lighting will automatically detect whether DMX512 signal is received or not. If there is no signal received at the DMX input, the display will not flash.

This situation can occur if:

-The three-pin XLR plug (cable with DMX signal from controller) is not connected with the input of the moving head light.

-The controller is switched off or defective, if the cable or connector is defective or the signal wires are swap in the input connector.

Note: It's necessary to insert the XLR termination plug (with 120 Ohm) in the link in order to ensure proper transmission on the DMX data link.

Technical Specifications

NEW CHARACTERS

With upgrade circuit board; adopting color LCD touch screen (2.8 inches) in display board; random replacement between English and Chinese; simple and clear; can be customized brand name in display; words in the display can change direction according to the products are heads up or upside down; easy to operate

TECHNICAL PARAMETER

20CH Special Function: Double focus, containing eight prism focus
Control channel: 20DMX 512 channels
Voltage: AC100~250V, 50~60 Hz
life span: 2000 hours
Lamp: 7R YODN 230W lamp
Scan: Pan: 540°, Tilt: 270°
Largest rotating speed: Pan: 2.45s, Tilt: 1.3s
Precise scan: Pan: 0.008°, Tilt: 0.004°
Color wheel: two color wheels, 14 plugged colors plus white, with half color and rainbow effect
Gobo wheel: one fixed gobo wheel, 17 plugged gobos plus white, with high speed gobo rotation effect
Prism: one rotating eight-prism, frost effect
Strobe: strobe frequency can be 15 times / second
Focus: electronic liner focus at 0°-3.8°
Automatic Pan and Tilt re-positioning system if accidentally knocked out of place and with correct positioning function
Available for setting macro instruction in advance

Controller reset function, with automatic switch
Electronic monitoring and the position error correction
Built-in cooling monitoring system
DMX channel level monitoring
Automatic data transmission fault diagnosis system
Up to IP20 degree of protection
Characteristics: light, highlighted, fast, and mute
Light size: 44*33*47 cm
Carton case size: 45.5*42*55 cm
Net weight: 16 kg
Gross weight: 25kg

Maintenance and Cleaning

The operator must make sure that correlative safety equipment and an expert inspects machine's technical installations after every four years in the course of an acceptance test.

The operator must make sure that correlative safety equipment and machine's technical installations are inspected by a skilled technician once a year.

The following points need to be considered during the inspection:

1. All screws used for installing the devices have to be tightly connected and must not be corroded.
2. There cannot be any deformations on housing, fixations and installation spots (ceiling, suspension, trussing).
3. Mechanically moved parts like axles, eyes and others must not show any traces of wearing (e.g. material abrading or damages) and must not reate with unbalances.
4. The electric power supply cables must not show any damages, material fatigue (e.g. porous cables) or sediments. Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.

Danger! High power! Danger to life!

Disconnect from mains before starting maintenance operation!

- We recommend an frequent cleaning of the device. Please use moist flax to clean. Never use alcohol or solvents.
- CAUTION! The lens has to be replaced when it is obviously damaged, so that its function is impaired, e.g. due to cracks or deep scratches!
- The objective lens will require weekly cleaning as smoke fluid tends to building up residues, reducing the light-output very quickly. The cooling-fans should be cleaned monthly.
- The gobos may be cleaned with a soft brush. The interior of the fixture should be cleaned at least annually using a vacuum cleaner or an air-jet.
- The dichroic color filters, the gobo-wheel and the internal lenses should be cleaned monthly.
- To ensure a proper function of the gobo-wheel, we recommend lubrication in

six-month intervals. The quantity of oil must not be excessive in order to avoid that oil runs out when the gobo-wheel rotates.

- There are no serviceable parts inside the device except for the lamp and the fuse. Maintenance and service operations are only to be carried out by authorized dealers. Please refer to the "inserting and exchanging lamp" chapter in this manual.

Replacing the Fuse

If the lamp burns out, the fine-wire fuse of the device might fuse, too. Only replace th fuse of same type and rating. Before replacing the fuse, unplug mains lead.

Procedure:

STEP 1: Unscrew the fuse holder on the rear panel with a fitting screwdriver from the housing (anti-clockwise).

STEP 2: Remove the old fuse from the fuse holder.

STEP 3: Install the new fuse in the fuse holder.

STEP 4: Replace the fuse holder.

- Should you need any spare parts, please use genuine parts.
- If the power supply cable of this device becomes damaged, it has to be replaced by authorized dealers only in order to avoid hazards.
- Should you have further questions, please contact your dealer.

We hope you will enjoy your lighting. We can assure you that you will enjoy this device for years if you follow the instructions given in this manual.